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PLANT INDUSTRY

WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 6 1925

REPORT FOR WEEK ENDING JUNE 6, 1925.

HAVRE:

The first three days were warm and grains grew rapidly from the rains of last week. Wednesday a shower of .36 inch accompanied by hail fell in a few minutes. On Wednesday night a slow rain started and in 18 hours 1.64 inches of rain fell. This was practically all taken up by the soil.

Spring grains are growing rapidly. The most of it is stooling. Some places in both spring plowing and later seeding grain did not germinate and is now just emerging. Corn which germinated is just through the ground and the delayed germination is just sprouting. Rye is well headed, as are brome grass and crested wheat grass.

Mr. N. F. Woodward, of the Office of Forage Crops, was here attending to some planting on Monday and Tuesday.

Dr. W. C. Cook, of the Entomology Department of the Montana State College, has been here during the week studying the cutworm and grasshopper situation. The only infestation of economic importance is an area in southwest Hill and adjoining portions of Liberty and Chouteau Counties where grasshoppers have taken some grain just coming through the ground.

Maximum temperature 65, minimum 40; precipitation 2.01 inches.

JUDITH BASIN:

Precipitation was recorded every day during the past week, and an abundance of moisture was received. A heavy rain of 1.19 inches occurred on June 3, but the precipitation on none of the other days exceeded .23 inch. All small grains have made a rapid growth, but the weather has apparently been too cold and wet for corn, which has developed a sickly yellow color. Alfalfa, brome grass, and crested wheat grass have shown very little improvement, and it is believed that at least 75 per cent of these crops was burned beyond recovery during the drought in May.

Maximum temperature 66, minimum 35; precipitation 1.57 inches.

HUNTLEY:

Precipitation has occurred on nearly every day of the past week and, as most of this rain was received in the form of gentle showers, little moisture was lost from run-off. A dashing rain accompanied by hail fell on June 2, but aside from garden stuff little damage was noted. With the advent of moisture and warm weather, crops have made a rapid growth. Spring-sown small grains are jointing and corn has emerged in all of the rotations, as have other crops which have been waiting for rain to bring them up.

With the exception of one day's plowing of fallow, field work has not been possible because of the wet ground.

Visitors during the week included Messrs. A. C. Cooley and C. W. Warburton.

Maximum temperature 81, minimum 39; precipitation 2.44 inches.

SHERIDAN:

Good rains fell the first of the week. The remainder of the week has been cool and cloudy with light showers nearly every day and with some heavy rains in other localities near by. Heavy hail fell in nearby localities, doing considerable damage to some crops, but none fell at the station. The rain was of especial benefit to late crops which had just been seeded.

Winter rye on the station is in blossom. Winter wheat and Hard Federation spring wheat are beginning to head. Alfalfa and sweet clover are in blossom. No field work of consequence was possible on the station with the exception of one day. Seedings of miscellaneous fields of sorgo and millet were made, and the date of seeding of spring wheat was seeded. All of the corn and potatoes were harrowed. All seeding has now been completed with the exception of the last date of seeding spring wheat. A sample of potatoes was received from the station at Greely, Colorado, and was planted.
Maximum temperature 72, minimum 44; precipitation 1.80 inches.

DICKINSON:

Favorable growing weather continued through the week. A rain of 1.09 inches on Sunday night and Monday morning started the week. Three small showers followed. There was very little wind and some cloudy weather.

Crop prospects are improved over a week ago but are less promising than a year ago for all crops except corn. Corn stands are good and the fields generally clean. Rye was damaged by the dry weather and is heading short. Winter wheat was hardly so far advanced and was damaged less by the dry weather.

Fallow on the rotations was plowed June 4 and 5. The ground was in excellent condition for plowing. All corn was given a second harrowing.

Alfalfa, sweet clover and grasses have grown rapidly since the rains but indicate a much lighter hay crop than last year.

Some reseeding of grains is still being done on account of the freeze.
Maximum temperature 74, minimum 50; precipitation 1.41 inches.
May precipitation amounted to .89 inch; 33-year average for the month is 2.39 inches.

January 1 to June 1	this year	3.17 inches
January 1 to June 1	33-year av.	4.96 inches.

MANDAN:

Agronomy

The weather this week has been mostly cool, with scattering light showers. The sky conditions have been overcast and threatening most of the time, but good rains have failed to materialize in the immediate vicinity. Heavy rains have been reported in districts all around Mandan.

Mandan, continued:

Sorghum, millet varieties and Sudan grass were seeded on June 2 and 3. Thinning of corn to stand in the plats and blocks has been in progress during the past two days. Plowing of fallow plats is nearly completed.

Rye in Rotations 31 and 32 is ready to turn under. This is the earliest, except one year, that they have been ready for plowing under.
Maximum temperature 82, minimum 45; precipitation .40 inch.

Cooperative Grazing Experiment

The steers were weighed on June 1. All pastures showed gains, but the rates of gain followed pretty well the rate of grazing. The total gains per pasture for the latter half of May were, as follows:

Pasture	No. of Steers	Total Gains in Pounds.
100-acre	10	248
70-acre	10	390
50-acre	10	285
30-acre	10	185
Rotation (70-acre)	16	300
Brome (25-acre)	10	200
Reserve (93-acre)	14	545

Horticulture

Winter injury notes on fruits have been taken during the week. There has been more killing of branches and plants than has been the case for a number of years. Not all the killing resulted from low temperatures during the middle of winter, as many branches that appeared to be alive a month and a half ago are now dead. They started very feebly, or failed to start, probably due in part to the dry weather prevailing this spring.

Apples and crabs, except semi-hardy and tender varieties, were damaged more by spring frosts which killed the blossoms, than by the killing of the wood. Such tender varieties as Delicious were killed back close to the ground, while a row of Duchess apples in the pruning experiment suffered from root killing.

Many varieties of plums, especially hybrid plums, suffered severe winter injury. In general, plums on P. besseyi roots suffered more severely than plums on P. americana roots. Sapa plums suffered severe winter injury regardless of their location, and were often killed back close to the ground. Opata plums and Compass cherries were among the hardier varieties, and did not suffer severely. Emerald, Waneta, and Cree appear to be among the hardiest of the Japanese hybrid group of plums. Plums, as a class, withstood the spring frosts much better than apples, and there are fair sets of fruit on many varieties. The blossoms of some varieties were almost entirely killed.

Mandan, continued:

Currants suffered a considerable amount of winter killing. London Market, Red Cross, and Franco German appear to be among the hardiest varieties being tested, while Cherry currant bushes were often killed back nearly to the ground. Yellow flowering currants came through the winter with very little injury.

Gooseberries were severely damaged during the winter. Haughton appears to be the hardiest variety under test. Carrie is almost as hardy. Oregon bushes were generally killed to the ground, or entirely killed.

A considerable number of strawberry plants were killed, even though protected by a good straw mulch. South Dakota, Dunlap, and Easy Picker suffered from the least amount of winter killing.

Grapes were severely damaged. Out of eighteen named varieties planted in a new variety test in 1924, only plants of Monitor, Suelter, Alpha, and Beta are surviving, and even these received a considerable amount of winter injury. This killing took place in spite of the fact that all the vines were covered with soil.

Raspberries came through the winter in fair condition when properly covered with soil. Otherwise they were killed to the ground.

Hardy native fruits, such as chokecherries, Juneberries, buffaloberries, and sandcherries, generally came through the winter in good condition.

All orchards are now receiving their second spraying of the season. Planting in the acre-garden has been completed.

Tomato plants, to the number of 5000, comprising about 70 strains, were set out in the breeding plat. The soil was in good condition at planting time, but the hot weather following, with strong hot winds from the south, was very detrimental to the stand finally obtained.

All bedding plants have been set out on the grounds, and trimming of hedges, pruning of shrubs, and other work with ornamental shrubbery begun.

A fair to good stand appears to have been obtained from last year's budding in the nursery. Cherries, however, failed to start when budded on P. tomentosa roots, while Zumbra, Compass, and Sapa plum-sandcherry hybrids, and Sioux sandcherries, are starting very nicely when budded on P. tomentosa. The budded plants in the nursery are being trimmed and tied to stakes.

Arboriculture

Work is well started in making up the inspection sheets for the summer field trips. This year both the 1916 and 1921 plantings will be visited, in addition to the new plantings put out this spring.

Mandan, continued:

Blister beetles made their first appearance on the caragana the first of the week. All hedges and nursery stock of this species has been sprayed with arsenate of lead.

Three days were spent in cultivating and hoeing the species testing block and shelterbelt nursery.

On June 6, the following species of conifers were seeded in small quantities in nursery seed beds - four twelve-foot beds in all - Western Yellow pine, Norway pine, Jack pine, Scotch pine, Black Hills spruce, Canadian White spruce, and Colorado Blue spruce.

ARDMORE:

The first three days of the week were hot and dry, and crops suffered for the lack of moisture. Heavy rains fell from the 4th to 6th, inclusive.

One alfalfa field was cut during the week. There was almost no yield of hay. Since the heavy rains, the other alfalfa fields will not be cut at the present.

The series of Field Days planned from June 7 to June 10, inclusive, had to be postponed because of the condition of the roads.

Mr. J. T. Sarvis and Mr. Oscar Mathews are visitors at the station. Maximum temperature 70, minimum 47; precipitation 2.94 inches.

ARCHER:

The weather has continued dry with cool temperatures during the whole week. The sky has been cloudy and the wind has maintained a high velocity. During the afternoon of June 6 it started to rain.

The winter wheat which was not seeded on fallow is rolling badly but all other small cereals are in good condition. The corn on the Dry Land plats was re-seeded June 5. The cut and wire worms took a heavy toll of the early seedings of corn.

The work at the station aside from re-seeding has consisted of plowing the fallow plats, cleaning of roads and alley ways between the plats, and the hoeing of weeds. Most of the trees have received the second cultivation and hoeing is in progress.

Sunday, May 31, Prof. Quayle and the Superintendent drove to Ft. Collins, where they met Mr. Sarvis, of the Northern Great Plains Field Station and Mr. Brandon, of the Akron Field Station. Monday was spent studying the various experiments at the Colorado Agricultural College and in the evening all, with the exception of Mr. Brandon, drove to Cheyenne. Mr. Sarvis and Prof. Quayle spent the next two days at the Cheyenne Field Station.

AKRON:

The Cereal spring sown small grain plats were trimmed during the week as well as the Uniform cropping series corn plats. The Rotation fallow plats were plowed and packed June 4 and 5. The 16-year average date for this operation is June 3. There is some reason to believe this date should be some two weeks earlier. Preparations are made for seeding the sorgos in the Forage Variety experiment early next week. Some time was spent in the forestry destroying weed growth. Considerable time was spent on fencing also. Fencing is occupying about all the spare time of the station force this spring.

This afternoon it is raining, and raining in such a way as to lead one to believe the long spring drought will be effectively broken. Winter wheat is in head in many of the fields about the station and it stands about 5 to 6 inches tall. The forestry is in full leaf. The yellow blossom sweet clover in the perennial forage variety experiment is in bloom.
Maximum temperature 92, minimum 51; precipitation 0.

NORTH PLATTE:

Weather conditions during the week have been very severe on small grains. No rain has occurred during the week and only .16 inch has been received in the past 20 days. Except on fallow there was but little moisture stored this spring and available moisture is practically exhausted on all continuously cropped land. Plats which looked fine two weeks ago are almost completely burned up. In many cases there is not sufficient moisture so that the plants can produce heads.

High winds are almost continuous. In 48 hours, June 4-5, the average wind velocity was 14.8 miles per hour and the evaporation .779 inch.

COLBY:

The usual became the unusual this week. The weather doled (a suggestive term) out this week was decidedly not to the liking of anyone in this immediate vicinity. The only objectionable feature about the weather has been the wind; and we have had enough of that to last awhile, though we still have it with us. Beginning Wednesday afternoon, June 3, the wind increased in velocity quite rapidly until a velocity of from 35 to 40 miles per hour was reached by night. This wind from the south has been blowing uninterruptedly since night and day with no apparent letup at any time until this afternoon, June 6, when it blows harder than that at times and is shifting back and forth from the south-southeast to the south-southwest. Also clouds are gathering in the west and reports are that it is raining 60 miles west of here and is gradually working this way. A rain is probably all that will stop the velocity. From 8 o'clock Thursday morning until 8 o'clock this morning, Saturday, the wind velocity averaged over 30 miles per hour. This was practically a steady wind at all times.

Colby, continued:

One redeeming feature of the wind has been that, though the temperatures have ranged around 90 degrees during the day, the evaporation has been relatively low for the extreme wind velocity. Just what damage will be done to the small grain crops is problematical. Winter wheat has shown but very little damage that may be attributed to the wind and what damage there is noted is only on those fields that were low in moisture content. The barley and oats are not showing any damage that may be due to the wind except on those areas that were already reduced in soil moisture content. Winter wheat for the most part is in the pre-milk stage. With favorable weather conditions from now on it is doubtful if the best wheat will be hurt much if any by the wind.

Corn is growing rapidly. All corn on the station, except some small nursery corn, was cultivated during the week. The D. L. A. corn was thinned during the week and one series of the corn varieties. The D. L. A. sorghums seeded the 2nd of June are showing a stand on some of the better seedbed preparations tonight, Saturday. Some disking and spring-tooth harrowing was done on commercial fields during the week. Owing to the excessive high wind and consequent danger of drying out the soil before the sorghums could germinate commercial planting of sorghums on the station was not done. These fields were disked that they might be in good shape for planting by the first of the coming week. The orchard was spring-tooth harrowed during the week. Good stands were secured in the soybean nursery. Feterita on the D. L. A. project shows a good stand which is very exceptional.

HAYS:

Except for one day the maximum temperature passed above the 90 degree mark every day during the week. A continuous heavy southerly wind swept this locality day and night without a lull or change in direction during the entire week. It is the longest period of continuous heavy wind from one direction without lull or change noted in several years.

All small grains except on fallow are burned badly. Many acres of winter wheat, already poor, were burned beyond recovery. All spring small grains are very short and badly burned except where seeded on fallow. Much of it is so short it will be difficult to harvest. Winter wheat on fallow still holds on. Although slightly burned, it still looks promising for 25 bushels per acre.

Work during the week has consisted largely in cultivation and soil moisture determinations.

The small grain plats, especially winter wheat plats are attracting more than the usual attention of visitors this year.

Maximum temperature 98, minimum 56; precipitation 0.

GARDEN CITY:

The past three days have been very hard on all crops. With average hourly wind velocities of 23.4, 21.7 and 22 miles per hour, and maximum temperatures of 96, 90, and 90, moisture has been disappearing rapidly. All spring small grains have dried up as has most of the winter wheat on continuously cropped plats. Fallow wheat is fast changing color, but still has a chance to make some grain.

Planting was finished on Tuesday with the exception of the sorghums in the date work. Most of the earlier planted sorghums are emerging to a rather spotted stand. The poor stand is due to a lack of moisture. No doubt, the other seed will germinate if rain is received in the near future. Cowpeas which were planted the first of the week are beginning to emerge. The plants that are high enough to catch the wind are being damaged to some extent by drifting soil. Very little soil blowing has taken place on the Dry Land project so far as the surface of most of the plats is quite cloddy.

Plowing of fallow and green manure plats will be completed today. There has been so little moisture received this spring that these plats are turning over very dry and cloddy, making it impossible to get a good job of plowing done.

Maximum temperature 96, minimum 55; precipitation 0.

DALHART:

This has been a very lively week for the Panhandle region. Farms have changed hands daily for a week. The wind has blown steadily day and night without a let up for nearly the entire week. The soil is drying out rapidly, the grass on the range is turning brown and many fields over the Panhandle have been covered, moved and crops destroyed. It has made several efforts to rain, but to date nothing has come of it. One day the wind was quite hot but the remainder of the time it has been moderately cool.

The past two weeks have been spent in preparing for planting. Last week the plats were prepared for the date plantings of grain and forage sorghums and cotton. The plats for milo and cowpeas on the rotations were also prepared for planting at that time. The first of this week the date plantings were made in schedule time. There has not been an interruption in field work during the entire week. The first date of planting was cultivated this week. The seed bed for the variety grain and forage sorghums was prepared this week, and everything is in readiness to plant these as soon as the proper time arrives. Everything this year is being planted as nearly as possible at the best time as determined by the date of planting records. The cowpeas, Sudan, Mexican beans, peanuts and sumac sorghum are being planted on the rotations today. The field corn was harrowed and thinned this week. The first two dates of planting were also thinned to stand this week, and the thinning is being done on the kafir on the rotations at this writing. In nearly all cases an excellent stand was obtained. It seems as if every seed that was planted has germinated. All seed was treated with copper carbonate this year which may account for the extra good germination.

Dalhart, continued:

Dr. W. H. Tisdale, of Washington, D. C., visited the station on the first and the sorghum smut work was planted during the afternoon of June 1. Dr. Tisdale was well pleased with the progress that has been made and with the work that was accomplished during his short stay.

The distribution of labor on the station this year is far in advance of any time since 1918. The arrangement in the planting program is such that at no time has the work been cramped. Everything has been ready and done in good time. There has been no soil blowing on the station and the crops have made a wonderful progress. The vineyard is in good condition, the vines having been trained and growth to date has reached the lower wire and in many cases is growing as much as a foot along the wire.

Many trees have been blown down or broken off during the wind of this week. The only tree damage on the station is among the Chinese elms. These trees have broken off badly in some cases. About four in the planting were broken off so badly that they had to be sawed off square at the top, leaving a stump from 2 to 3½ feet high. These are splendid trees for making a rapid growth in this section, they show up well and make a beautiful shade tree. However, from the present indications it seems as if it might be softer wood than the maple. Many black locusts were blown down and broken off in Dalhart but these were badly damaged by the locust borers.

The variety grain and forage sorghums will be planted next week. This will be followed by the planting of milo on the rotations. After the milo is planted, the increase fields will get solid attention until finished. One of the increase fields is now ready for the planting of seed crops but the planting will be delayed until about the 15th. Preparation of the cereal and forage block alternate will be started Monday and the work will continue until it is finished.

Winter rye has made good progress but the yield is going to be light on account of the heavy damage by rabbits before fencing. The rabbits spent most of the winter digging the rye out by the roots. Some of the plats will likely have enought grain to pay to thresh. The oats are looking very poor for making anything this year. The first two dates of cotton are up to an excellent stand. Unless the rabbits and grasshoppers get too numerous and break in on the cotton, excellent stands will be obtained by thinning. Some cotton selections were planted on June 1 and have emerged. A nursery of some kafir selections and several varieties of sorghums was put in the first of the week. Only one row was devoted to a variety. In this nursery was put some of the kafir milo crosses made by Mr. J. B. Sieglinger, of Woodward, Oklahoma.

Peanut varieties were planted last week and are just beginning to emerge. These will be fenced to prevent rabbit damage. Poison grain is being distributed in order to kill rabbits and rodents. Six varieties of soy beans will be planted the first of the week at the time of planting the variety cowpeas. The plats are being prepared for planting today.

TUCUMCARI:

With an average hourly wind velocity of 12.9 miles, the past week has broken all records since this station was established. The twelve-year average June velocity is 6.3 miles, less than one half that of the past week. An unusual feature of the wind has been its consistency, blowing unusually hard almost the entire week, with even greater force at night than by day. May 31 was the calmest day of the week, with 8.8 miles per hour, while June 5 was the day of greatest movement, 17.4 miles per hour, all readings made on the 2' anemometer.

The evaporation, 3.550 inches, also breaks all station records, considering all weeks in all months of all years to date. The mean temperature for the week, 76.5, is only 1.5 degrees above the June mean over the twenty-year period.

Since November 1, over seven months, the total precipitation has been 3.09 inches, compared with a long-time average of 7.05 inches. This 3.09 inches fell on 23 different dates.

Previous to the winds of this week station plat and field stands were very good in most cases, although the variety sorghum block and about twenty acres of increase had not been planted. These plantings had not been made due to the fact that the soil was so dry a stand would not have been procured. While the high winds have badly whipped all crops, turning some leaves on the sorghums yellow and cutting cowpea leaves, comparatively little soil blowing has occurred. Rain and cessation of wind would cause practically all plats, with the exception of several date plats, to revive and this would hold true of most increase. About five date plats have been buried in sand beyond recovery, while about an acre of broadcast increase cane has blown very badly. Nothing could be done to lessen the damage, for a lister could not bring moist lumps to the surface--working the land under such conditions would be like stirring an ash heap to prevent blowing.

No reports have been received from the wheat section south of here, but it is probable the winds have greatly damaged what few fields of wheat had survived the winter. A great acreage of row crops will still be planted if rain is received, but the spring has been so dry that the acreage now planted is much lower than usual, with the exception of a few small communities. It is probable that the winds did not seriously damage row crops where they were lister-planted and where the rows ran north and south, for the wind has been in the south most of the week.

Ranges are unusually poor, for the rains of early May did not supply moisture sufficient to induce much new growth of grass. Cattle are unusually poor and weak and many are being shipped from points south-west of here, where conditions are even more serious than here, to Kansas and other points for grazing.

Agricultural and range conditions in this section are so poor that they can be compared only with 1918, the most disastrous year in a decade.

Maximum temperature 96, minimum 55; precipitation 0. Average hourly wind velocity 12.9 miles. Evaporation 3.550 inches.

BIG SPRING:

The weather has been warm during the past week, and very conducive to plant growth. The rain on the night of May 29 soaked the soil up sufficiently so that good stands were obtained on practically all of the plats; before this rain the stands on many of the cotton plats were very spotted.

Exceptionally high winds for this time of the year have prevailed during the past two or three days. Although no damage has been done to the station crops, many farmers report that their entire cotton crop has been blown out.

The June 1 date of seeding was made on time; with the exception of cotton all the plats are up to good stands. The drilled plats of millet in the rotations and the drilled plats of millet, kafir and Sudan grass in the forage sorgo variety tests were planted on June 1; all are up to good stands today.

The work for the most part this week has consisted of knifing the rotations and variety plats and in thinning the first date of seeding of cotton and sorghums.

Maximum temperature 94, minimum 70; precipitation 0.

LAWTON:

Hot, windy weather during the past week hastened maturity of small grains and harvest has been in full progress the latter half of the week. Wheat and oats dried up instead of ripening normally. The plants are weak and short and lodge rapidly. Maturity was very uneven. With a stiff wind blowing it is impossible to bind either of the crops and prevent a heavy wasteage.

Practically all of the row crops on the station were cultivated during the week. Harvest of small grains will be completed within a couple of days and thinning of all sorghum crops will be completed during the coming week.

All row crops are in a good state of cultivation but the soil is hard and dry. Cotton chopping is also getting under way throughout the county.

Harvest is nearly ten days earlier than last year.

Maximum temperature 94. The minimum ranged from 68 to 74.

WOODWARD:

During the past week the maximum temperatures have ranged from 87 to 97, and heavy winds have blown almost constantly day and night. The lowest 24 hour wind velocity for the past 8 days was 11.1 miles per hour, and the highest 20.1, with an average of 14.5 miles for the last 8 days.

Wheat and rye on the D. L. A. plats, and part of the Dairy pasture plats, were harvested June 2 and 3, probably the earliest in the history of the station. Heading of wheat will probably begin this week.

Some planting has been done on the Dairy farm, using furrow openers on the planters to reach moisture. Planting of experimental plats is being held up, waiting for rain.

Maximum temperature 97, minimum 61; precipitation .02 inch.
Evaporation 2.756 inches. Average hourly wind velocity 15.3 miles.

NOTE:

Twenty-four copies of Department Bulletin No. 1337, "Work of the Northern Great Plains Field Station in 1923", have been sent to each of the field stations of this office.

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U. S. DEPARTMENT OF AGRICULTURE

JUN 13 1925

REPORT FOR WEEK ENDING JUNE 13, 1925.

HAVRE:

The past week was rainy, precipitation being recorded every day, and totaling 1.49 inches for the week. This amount, together with that of last week made field work impossible except for a few hours on Tuesday.

All grains are growing rapidly. Early grains are stooling nicely and some are shooting. Flax on the rotations was seeded Tuesday. It was possible to seed very shallow which should insure good stands with the present soil conditions.

Alfalfa has made but little recovery from the May drought. It will soon be ready to cut and second cutting should make a rapid start. The grasses seem to have recovered more than alfalfa, especially brome, which is sending out new stems.

With 3.57 inches of rain to date in June, crop prospects in this part of Montana are unusually good.

HUNTLEY:

The weather has continued unseasonably cold during the past week and light showers with an occasional dash of hail have been of almost daily occurrence. Small grains have made a very good growth in spite of the cool weather but corn has a poor color and has made little progress. Plats of grain which showed a very poor and ragged stand two weeks ago now present a more uniform cover due to the germination of seed which lay in dry ground previous to the rains of a week ago. Weeds have also responded to the more favorable moisture conditions and are coming up thickly in roads, alleys and plats.

When conditions permitted work in the field the plowing of fallow was resumed, roads were duck-footed and alleys were cultivated. The first cultivation of corn and other row crops is being started today.

Mr. J. T. Sarvis visited the station on June 12.
Maximum temperature 76, minimum 38; precipitation .38 inch.

SHERIDAN:

The week was generally cool with considerable cloudiness, although quite warm at times. All crops have been making a good growth since the rains of last week. There now appears to be a good stand of corn on all of the rotation plats, much of it having emerged on the spring plowed plats with the warmer weather of the last few days.

Sheridan, continued:

Lining of the roadways was completed early in the week. Green manure plats in the rotation field were plowed the 12th, with the exception of the plats in field peas. Summer fallow in the rotation field is nearly completed.

Mr. J. T. Sarvis visited the station on the 11th.
Maximum temperature 77, minimum 37; precipitation .41 inch.

DICKINSON:

During the week the rainfall amounted to 1.65 inches. This nearly all went into the soil so that conditions are now excellent for crop growth. To date in June the rainfall totals 3.06 inches.

The condition of grain crops has greatly improved but still the prospect is only fair because of thin stands as the result of the freeze. Rye is now fully headed, short, and the stand thin. Early in the season rye appeared better than winter wheat, but was damaged more by the dry weather in late May. Winter wheat now appears better than rye where the two crops are seeded in stubble and winter wheat in standing corn is in excellent condition.

Corn on the rotations was harrowed the third time during the week. There was too much rain for corn and the plants have poor color but stands are good.

Millet and sorgo varieties and Sudan grass were seeded. A good deal of flax has been seeded on farms since the rains.

Weeds are coming so fast that some extra labor will be required to keep the place in shape.

Visitors included Mr. W. P. Baird and Mr. J. T. Sarvis, from Mandan.
Maximum temperature 70, minimum 36; precipitation 1.65 inches.

MANDAN:

Horticulture

Most of the field work done during the past week has consisted of field cultivating and hoeing.

Fruit trees and small fruits are apparently taking on a new lease of life since the heavy rains in the first part of the week. Prospects of a fair fruit crop are now quite promising, and some thinning of plums, especially of Desota, Wyant, and Opata, was found necessary and has been done.

Mandan, continued:

Trees and shrubbery on the grounds are looking well at the present time but, due to bud killing last winter and in the early spring, there is very little bloom this year. The best showing is made by Villosa, Josikea, and Exodi lilacs, while Van Houtte spirea, Mock orange, Opulaster, and Red osier, are only blooming scatteringly. Nearly all the Peonies are blighted this year.

Arboriculture.

The heavy rains in the early part of the week made it impossible to continue the usual work in the field, but cultivation and hoeing have been started again today, Saturday.

All tree nursery stock is showing considerable improvement, and seed lying dormant in the ground, owing to the dry conditions, is now showing signs of germination.

Mr. J. T. Sarvis, Associate Agronomist at this station, during the early part of the week was at the Ardmore Field Station, and has left there to visit the stations at Newell, Huntley and Dickinson. He plans to return to Mandan about June 17. Mr. W. P. Baird, Horticulturist, left on June 12, planning to visit experiment stations at Dickinson, Havre, Huntley, Sheridan, Moccasin, and other points. He will return to Mandan about the end of the month.

Agronomy

The week has been cool and wet in the fields, following the heavy rains on June 7 and 8. Up to date this month the precipitation totals 4.34 inches. This puts the soil in excellent condition to carry crops well into July.

The first cultivation of corn plats and blocks is about completed. The soil is not any too dry to cultivate well.

Plowing fallow plats and 'green manure' rye were completed on the 8th. The rye was high.

Soil moisture samples were taken on wheat and corn of the Main field, and at the Grazing pasture. The penetration of moisture from recent rains was from three to four feet on the corn, and about 20 inches on the sod in the pasture.

Mandan, continued:

Cooperative Grazing Experiment

The native grasses in the pastures are beginning to pick up as a result of the recent rains.

The dam was not full to overflowing as a result of the recent rains, which indicates a maximum of penetration.
Maximum temperature 70, minimum 40; precipitation 3.94 inches.

Visitors during the week included Messrs. R. H. Wilcox, Farm Economist, Bureau of Agricultural Economics; B. Youngblood, Director, Agricultural College, Texas; G. W. Morgan, Superintendent, Experiment Station, Havre, Montana; Lewis Campbell, Emigration Department, Northern Pacific Railway.

BELLE FOURCHE:

Frequent rains have been in order since the first of June. To date there has been only one day without rain, although the amounts received have been small for the most part. The maximum received during any 24-hour period is .80 inch. The total for June to date is 2.02 inches.

All crops look good at this time. Spring grains in particular are in excellent condition, and are as far advanced and as promising looking as they have ever been at this time. Barley and oats are now in the boot and most of the winter wheat is headed.

Corn is a little off color, but all plats are up to good healthy stands and should grow rapidly when the weather warms up. The sorghum in the rotations was planted on the 13th.

Temperature for June has been decidedly below normal. There has been no warm day and for the most part the maximum temperature has been under 70. No frosts have occurred.
Maximum temperature 74, minimum 40; precipitation .77 inch.

ARDMORE:

Precipitation during the week amounted to 1.65 inches. This was a continuance of the rain of the previous week which amounted to 2.94 inches, making a total of 3.59 inches. This was one of the heaviest rains recorded in the history of this station.

On the week ending May 30 it was reported that small grain crops were suffering for moisture. The effects of the dry weather previous to this time are no longer noticeable, and it is doubtful if any material damage was done.

Ardmore, continued:

Alfalfa was in a bad condition previous to the rain, and is recovering very slowly. It appears that this crop will be poor. Wheat grass hay requires heavy rains in March and April to make a good yield, and this crop will be very short.

Some damage was done by the heavy rain. On the station, sorgo and millet were just coming through the ground. The furrows left by the planter and drill were washed full, and the tender plants completely covered with mud. It was necessary to re-plant all millet and a 40-acre field of sorgo.

ARCHER:

The total precipitation for the week was .99 inch. This occurred during the afternoon of June 6 and continued most of Sunday, June 7. Since this date the weather has been dry and rather cool. This condition has been favorable for weeding operations which consisted mostly of hoeing. Cultivation of corn in the general field was started Friday. Other work consisted of re-painting the inside of the office and bunk house building. Crop conditions have greatly improved since the rain.

Maximum temperature 84, minimum 36; precipitation .99 inch.

AKRON:

The rain reported falling at the time last week's report was being written totaled 1.14 inches. Some hail fell here at the station but not enough to cause appreciable damage. The storm was quite general over the whole of Northeast Colorado, and in some sections was accompanied by tornadoes. One such tornado area was approximately eight miles east and five to six miles south from the station. Another such area was south of Wray some sixty miles east from here. Though not large in each case, the damage was quite complete within these tornado areas.

The ground was too wet for field work before Tuesday noon, so the sheep were very opportunely sheared. Teams were started Tuesday afternoon, harrowing the surface planted corn, and go-digging the listed corn. The forage sorgo, and the sorghum varieties were seeded in the General Forage Variety Experiment the 10th and 11th. The sorgo and sorghum nursery is being seeded today. Rotation alleys were cultivated. The orchards were cultivated. Weeds almost immediately sprang into growth so the tractor and duck-foot cultivator were started Thursday over all open ground. Some of the better and more nearly fixed types of sorgo and sorghum are being increased this spring.

Akron, continued:

Lot No. 1 of sheep were turned into the native sod pasture, and lot No. 3 were turned into the rye field late in the week. Lot No. 2 will probably be turned into the fallow field next week.

Winter wheat is making a remarkable recovery and prospects now are for average yields of from 7 to 8 bushels on poorer pieces to 12 to 15 bushels per acre on the better pieces. Field work was stopped for a half day Friday morning due to a rain of nearly half an inch Thursday evening.
Maximum temperature 92, minimum 40; precipitation 1.54 inches.

NORTH PLATTE:

Growing conditions have improved considerably during the week. Showers the first of the week totaled .30 inch. This was quickly used up by high winds which lasted for four days. On Thursday night the first good rain for four weeks occurred. The bench gauge recorded .95 and the table gauge 1.28 inches. About half of the grain plats will recover enough to make fair yields if more rain follows. A number of plats were too badly burned to recover unless new growth starts from below.

Corn is making a rapid growth. The chief activity during the week has been preparation for Visitors Day, June 16.

GOLBY:

The high winds mentioned in the last weekly report finally ended on Sunday evening, June 7. These winds dried out most of the winter wheat and the barley quite noticeably. Winter wheat that has looked fine all spring continues to have excellent prospects to make a good yield, while the fields that had already showed little promise are even less promising than before. The general opinion from observation and from the reports and opinions of others is that the better wheat was not injured to an alarming degree, while the poorer wheat was made still poorer. This is especially true of the plats upon which soil moisture samples are being made. Those that have available moisture do not show the whitening effect due to the winds while those plats that had the moisture well reduced by the growing plant present a very dried and burnt up appearance.

Oats were very badly dried except on summer tilled ground. In fact it is safe to record now that some of the oat plats will be a total failure this season. For the most part barley does not show a very marked loss. Some fields and a few plats are very much dried in spots, however. Spring wheat, in general, presents almost the same appearance as oats; except that no plat on the D. L. A. project could be classed as a total failure at this time. The oats in the variety test do not show burning as much as the plats in the rotations.

Colby, continued:

Barley varieties in the nursery and in the variety test are beginning to turn. There is a possibility that some of the barley will do to cut during the coming week. It will be ten days before winter wheat will do to cut.

Corn continues to grow and has a good color. The balance of the experimental corn was thinned to uniform stands during the week. Rogueing of small grain plats was continued during the week when the wind was not too high. This has been a very bad year to do efficient rogueing because of the high winds that have occurred on almost every day.

Three fields were listed to sorghums for feed during the week. Two small fields remain to be seeded. Seeding has been delayed purposely that they might be drilled soon after a rain to insure a stand. A good stand was secured on the D. L. A. project sorghum plats with the exception of three plats where the cultural treatment called for does not always provide for moisture at seeding time. They will not be reseeded until rain comes. The sorghums have not been thinned as they are not large enough now to cultivate.

Warm days with an occasional dry weather shower were the weather features of the week.

HAYS:

The temperature ranged between 51 and 97 degrees, running high most every day. During the week two showers occurred, one of .52 inch on the 7th, and .37 inch on the 12th. These came too late to benefit the small grains, but will be of some benefit to the feed crops, some of which are not up to a good stand on account of dry soil.

Harvest was commenced on the project yesterday, the 12th. The oats and barley plats have all been harvested and the winter wheat is being harvested as rapidly as possible, all plats being either matured or dead. Much of the straw has fallen during the past week because of fly damage. It appears that the spring brood of fly has destroyed not less than 50% of the wheat where the stand was thin in the spring. There seems to have been just about as much fly in the fallow plats, but the wheat, because of having stooled more and being thicker, was able to feed the fly and still come through with a fair stand which will thresh out a worth-while yield, in spite of the drought and fly. Many of the plats of wheat sown on ground cropped the previous year will not really be worth harvesting. It is the nearest a complete failure because of drought since 1917.

Spring wheat is for the most part burning up except on fallow and that is suffering.

Hays, continued:

Canadian field peas for the first time burned up at a height of about 4 to 6 inches. These were plowed under today. The ground turned up bone dry.

This locality has been swept by a very heavy south wind which has been continuous night and day during the past two weeks except for about three days. It is one of the longest spells of continuous heavy south winds during this time of the year on record.

GARDEN CITY:

Lower temperatures have prevailed throughout most of the past week. Rain has threatened on most every day but only two light showers were received. .20 of an inch of moisture was received on the 10th and .25 of an inch fell on the 11th. Both of these showers were accompanied by hail which did little damage to crops growing on the station. The hail stones were exceptionally large but fell at a time when there was little wind movement. Some hail damage has been reported in other parts of the county.

Winter wheat in the methods of fallow series is ripe and ready to harvest. That growing on fallow in rotations will be ready to harvest the first of next week. Wheat on continuously cropped plats is so short that it will have to be harvested with a mower rather than a binder.

Sorghum crops are emerging very irregularily. Plants varying from those just emerging to those three inches in height may be found in the same row. The late showers have aided in bringing the crop up on the dry plats.

Cowpeas have emerged to an excellent stand.
Maximum temperature 102, minimum 47; precipitation .45 inch.

DALHART:

The past week has been hot, dry and windy. There was one little shower which stopped field operations Thursday for approximately a half hour. After this short halt, the work was continued without delay. The continuous heavy winds which have been blowing recently have dried the soil considerably. However, in spite of the loss of moisture, the soil still turns over in good shape.

The teams were busy in the field during the entire week. One plow was kept going on the cereal and forage block alternate. This plowing and harrowing was finished Friday of this week. The remainder of the cereal and forage varieties was planted this week, as well as the cowpea and soy bean varieties. The fallow plats are being plowed today (Saturday), also the plats of c.c. milo and the listing on c.c. milo.

Dalhart, continued:

Thinning of the crops to stand has been continued during the entire week without a halt except for the short time taken out for the rain of Thursday. The thinning today will finish everything that is ready to thin. Within a few days there will be plenty of thinning which will continue for some time. The cotton will be ready to thin within the next few days. Unless some misfortune happens, the cotton rates and varieties will have an excellent stand. It was planted thick enough so as to be sure and have a good stand to allow proper thinning.

The last date of planting has emerged, also the cowpeas on the rotations. The prospect for a crop of oats is looking poorer each day. The oats were planted during the dry period and after getting the rains has not made good headway. The winter rye is looking good except for the stand which was thinned out considerably by rabbits. All the crops planted to date, which excludes the small grains, are making good headway and are looking good.

The first two dates of planting were cultivated this week.

The first of the week will wind up all the station planting except the last date of planting. The plats are being prepared for planting the milo on all the rotations, the increase field, the cowpea variety alternate and for other variety increase plantings. One more date of cotton is to be planted on June 20. The cotton on the last date of planting is just about ready to germinate. The June 1 planting is emerging.

TUCUMCARI:

While the past week has not been so extremely high in wind velocity as the preceding week, it has still be very unfavorable for crop growth. All crops were wind-whipped and many were sand-blown throughout the period May 30--June 6, and a small amount of hail on the night of June 6 injured cotton and cowpeas quite extensively. Hot weather, rather than high wind movement, and lack of moisture the past week have prevented recovery of crops to any extent. The north field plats are looking well with the exception of cotton, cowpeas, and peanuts, while the center field rotation and M. C. plats are in fair condition. All cotton, most cowpeas, and a large amount of increase kafir and milo are badly injured and will recover only in case rain is received soon.

Due to the dry condition of the soil, cotton planting was not attempted on the June 10 date, but listing of these plats will be attempted soon if rain is not received. It will be impossible to plant the June 15 sorghum date-of-planting plats in moist soil tomorrow with planter and furrow operners and this date will either be delayed or planted with lister. If it seems probable there is enough moisture five to seven inches from the surface to insure germination, listing will be resorted to.

Tucumcari, continued:

Rains have been very local in character this spring, farmers ten miles east of the station reporting an abundance of rain to insure good stands and rapid growth. Other localities not ten miles from the station are so dry that listing is impossible. This "spotted" condition exists over the entire northeastern part of the state.

Cultivating, field cultivating of increase land too dry to plant, and some thinning, have been done the past week.

Mr. H. J. Clemmer, of the Dalhart Station, is spending today (Saturday) at the station, while Mr. J. L. Lantow, of the State College, is here in connection with the steer feeding experiment. The cattle will be weighed three consecutive days, starting this date, and will then be marketed at Kansas City. It now appears the gains for the entire period of seven months will very closely approach two pounds per day per head. Members of the New Mexico Livestock Breeder's Association, meeting in Tucumcari, today, are to visit the station this afternoon to see the steers.

Maximum temperature 97, minimum 52; precipitation .26 inch.
Evaporation 3.03 inches. Average hourly wind velocity 8.2 miles.

BIG SPRING:

Ideal growing conditions have prevailed during the past week, and as a result all crops have made excellent growth. A rain of .40 inch, which fell on the night of June 9, helped very much in improving crop conditions. This shower brought the June 1 date of seeding of cotton, which had emerged very spottedly, up to a good stand.

The early Wheeler peaches were picked this week; the yield was light and of inferior quality.

All plats in the rotations and in the cooperative field were trimmed this week, and the thinning of milo in the rotations was started. One cultivator has been kept busy in the commercial fields of Sudan grass and milo for the greater part of the week.

Maximum temperature 96, minimum 62; precipitation .40 inch.

WOODWARD:

The fore part of the week was hot and dry, but the drought was broken by .67 inch of rain Wednesday night. The fourth date of cotton was planted the next day. Practically all of the D.L.A. plats to be planted were harrowed, and all cowpeas, Sudan grass and sumac were planted Thursday afternoon. Rain Thursday night made it impossible to continue planting.

Woodward, continued:

All wheat and rye plats were threshed during the early part of the week. The yields, which were rather higher than expected, are given below.

Wheat

C C - A -	5.5	bu.	per	acre	
C C - B -	18.5	"	"	"	
C C - D -	20.8	"	"	"	
C C - F -	18.8	"	"	"	
C C - A'-	3.7	"	"	"	Duplicate of A
C C - B'-	22.7	"	"	"	" " " of B
C C - X -	8.7	"	"	"	Late disked
C C - Y -	20.2	"	"	"	Early plowed (shallow)
C C - Z -	16.7	"	"	"	Disked from harvest to planting time
151 - A -	24.2	"	"	"	
152 - A -	22.5	"	"	"	
153 - C -	20.5	"	"	"	
154 - A -	19.3	"	"	"	
155 - A -	17.5	"	"	"	
156 - A -	26.0	"	"	"	
164 - B -	41.2	"	"	"	
164 - C -	32.7	"	"	"	
166 - C -	28.2	"	"	"	
167 - C -	23.5	"	"	"	
262 - B -	19.7	"	"	"	
263 - B -	9.0	"	"	"	
264 - B -	17.5	"	"	"	
265 - B -	13.0	"	"	"	
402 - A -	20.3	"	"	"	
570 - C -	24.7	"	"	"	
Average	19.8	"	"	"	

Winter Rye

C C - A -	3.0	bu.	per	acre	
C C - B -	9.1	"	"	"	
C C - D -	12.1	"	"	"	
C C - F -	7.5	"	"	"	
C C - X -	5.4	"	"	"	Late disked
C C - Y -	12.3	"	"	"	Early plowed shallow
C C - Z -	7.0	"	"	"	Disked from harvest to planting
Average	8.1	"	"	"	

Some planting has been done on the cereal project and planting is going forward again today (Saturday), and will be finished on D.L.A. plats Monday if the weather does not interfere.

Maximum temperature 98, minimum 55; precipitation 1.26 inches.
Evaporation 2.500 inches. Average hourly wind velocity 6.4 miles.

96

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WEEKLY STATION REPORTS

OF THE OFFICE OF

DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 20 1925

REPORT FOR WEEK ENDING JUNE 20, 1925.

HAVRE:

Showers amounting to .54 inch fell the first of the week, further delaying field operations. This brought the total precipitation for the month to 5.44 inches.

The last of the week was clear and warm and crops made unusually rapid growth. Barley and some of the early sown wheat is in the boot. Rye for green manure is ready to plow under. Sweet clover is blooming. The stand is very thin, as is usually the case. The sweet clover seeded with a nurse crop last year is very thin while that seeded alone is excellent.

Alfalfa is ready to cut but is short due to the may drought. Irrigated alfalfa is also ready to cut and is unusually heavy.

Corn is growing rapidly now but is weedy due to the wet weather. From May 29 to June 16, we were only in the field a part of two days. There is still some grain and alfalfa to seed under irrigation. This, however, is not unusually late when water is available.

HUNTLEY:

Warmer weather throughout the past week has provided excellent growing conditions for all crops. Corn, beans and sorgo which have made but little growth because of the cool weather previous to this week have picked up considerably, and in addition to an increase in height have taken on a healthier color. Small grains are heading out and flax shows an occasional bloom.

Field work has consisted of haying and cultivation of row crops.

Mr. W. P. Baird, of the Mandan Station spent Sunday at this station inspecting the various tree, fruit, and vegetable plantings.
Maximum temperature 93, minimum 45; precipitation .15 inch.

SHERIDAN:

The weather remained rather cool and unsettled the first part of the week, but the last few days have been clear and warm. Plowing for summer fallow has been completed. All of the hay on plats has been mowed, but none of it has yet been weighed. A part of the corn has been thinned and hoed.

Sheridan, continued:

All crops are growing rapidly. All but the later varieties in the variety tests of spring grain are beginning to head. The appearance of winter wheat has improved materially, except on some of the fall plowed plats.

Mr. W. P. Baird visited the station Monday, the 15th.
Maximum temperature 88, minimum 46; precipitation .25 inch.

DICKINSON:

Good growing weather has continued through the week and all crops have developed rapidly.

Winter wheat is heading and spring wheat is about a foot high. Corn was cultivated the first time. Warm weather of the past few days was of benefit to this crop. Most of it is now only about 6 inches high.

Rye was plowed under in the green manure rotations on the 17th.

Most of the week has been spent cleaning up weeds.

Visitors included Congressman Thomas Hall and Mr. W. O. Whitcomb, Superintendent, Montana Grain Inspection Laboratory.
Maximum temperature 89, minimum 44; precipitation 1.12 inches.
June precipitation to date-- 4.18 inches.

MANDAN:

Agronomy

The fore part of the week was cool and the latter part warm. Field work was delayed early in the week because of rains.

All crops made rapid advancement during the week. Brome grass, and part of the alfalfa, will make a light crop, as they were set back by the drought earlier in the season.

Yellow sweet clover in the Forage Crop rotations was cut during the week. The yield was light. Corn has been cultivated once.

The rainfall for the month, to date, has been 5.75 inches. The rainfall for June, 1924, was 5.56 inches, and the 50-year average for this section is 3.43 inches. The total for the year is slightly below normal.
Maximum temperature 89, minimum 48; precipitation 1.30 inches.

Mandan, continued:

Cooperative Grazing Experiment

All pastures improved during the week. The brome grass is growing rapidly in the cultivated pasture, and is now furnishing plenty of feed. The indications are that none of this grass will be able to head out in the pasture this season.

It was necessary to move the cattle in the rotation pasture to another division. This is the earliest this has been done since the pasture started. The division the cattle were taken from will, no doubt, recover enough, so that it can again be grazed later in the season.

The dam in the reserve pasture is full of water. Most of the last rain went through the spillway.

Horticulture

Permanent labels for fruit trees, grapes, and small fruits, sent out to farmers in the Northern Great Plains area for testing, have been completed. Considerable time and care have been spent in this work to secure accurate records of this project in the future.

Spading and sodding of lawns adjoining the greenhouse, necessitated by the addition of the permanent hotbed heated from the greenhouse last spring, was done the early part of the week.

Transplanting of fruit crosses and rooted greenwood cuttings of small fruits was done.

Hoeing and cultivating in the fields, gardens, and on the grounds, have been carried on the latter part of the week, and is at present pursued intensively, as the weeds have gained quite a foothold during the wet weather.

Some spraying with Sodium arsenite along the snake road, for killing weed growth there, was tried with encouraging results.

With the present warm weather enjoyed, all vegetation is making a splendid growth.

A few peonies, Mock orange, Opulaster and Rugosa roses, liven the landscape with their blossoms, and Cannas, Geraniums, and other bedding plants, are budding and blossoming nicely.

Mandan, continued:

Arboriculture

Shelterbelt inspection sheets, maps and schedules, have been completed. John L. Emerson will start on June 22, on the inspection of a part of southwestern North Dakota, and practically all of South Dakota and Wyoming. Charles A. Gillette will start on June 29 and will inspect most of North Dakota, and a part of eastern Montana and northwestern South Dakota. E. J. George will leave on July 6, and inspect a part of northern North Dakota and most of Montana. Robert Wilson plans to spend at least a week with each of the inspectors some time during the summer.

Visitors of the week included the State Irrigation Engineer from Bismarck, North Dakota; A. C. Kuenning, Superintendent, Williston, North Dakota, Sub-Station; J. B. Shepard, Division of Crop Estimates, Bureau of Agricultural Economics; W. T. Craig, Agent, Cereal Office, from Ithica, N. Y.; W. O. Whitcomb, Superintendent, State Grain and Seed Laboratory, State College, Bozeman, Montana; Joseph Kitchen, Commissioner of Agriculture, Bismarck, North Dakota.

JUDITH BASIN:

Cool, rainy weather continued to prevail during the fore part of the week but the last few days have been clear and unusually warm. Rain has been received nearly every day during the past three weeks and a total of 3.07 inches of precipitation has been recorded to date during June.

The recent warm weather combined with the favorable moisture conditions has caused all crops to make an exceptionally rapid growth. Spring wheat, oats and barley are about 18 inches high. Winter rye has attained a height of over 3 feet and is ready to turn under. Alfalfa and sweet clover on the pasture blocks, field beans and potatoes are up. Harvesting of alfalfa has commenced but due to the drought in May, this crop will be almost a total failure.

Mr. W. P. Baird of the Northern Great Plains Field Station was a visitor on the 18th.

Mr. R. B. Tootell and Mr. H. Reik, students at Montana State College, arrived on the 18th to assist with the work at this station of the offices of Dry Land Agriculture and Forage Crop Investigations during the summer months.

Maximum temperature 43, minimum 36; precipitation .90 inch.

AKRON:

Precipitation has been recorded on four of the past seven days, totaling .56 of an inch. The green manure rye plats were plowed under the 16th, four days later than the average date. The corn was cultivated during the week end, both the go-dig and the cultivator being in use. The Annual Forage variety plats were trimmed. The orchards were cultivated and hoed and the small grain nursery hoed. Station roads were dragged. Other work consisted in getting ready for the annual field day and picnic which came on Wednesday, the 17th. The day was ideal and an interested crowd of 2,000 people was present. Professor George Morton, Head of the Animal Husbandry Department of the State Agricultural College, was the speaker of the day.

Weeds are growing rapidly and teams will be very busy the next several days. Corn and the sorgo also are growing rapidly.
Maximum temperature 92, minimum 59; precipitation .56 inch.

COLBY:

Dry, ripening weather during the week hastened the maturity date of the winter wheat and barley. While no cutting was done during the week there were several plats that could have been cut. Some of the wheat is going to be badly shrivelled while some will not be shrivelled at all. Cutting will start on the station the first of the coming week. Heading will start in the county sometime during next week. The county this year presents a difference in prospective yield from the southeast to the northwest part of the county of from a total failure of winter wheat to wheat that will probably make 35 bushels per acre. Wheat on the station is probably representative of average conditions in the county.

Corn continues to grow rapidly. It is about knee high now. A good stand of sorghums on commercial fields have been secured. The surface planted milo on the D. L. A. project was thinned the last of the week. A light shower of 26 points fell late this evening. This is as large a rain as has fallen this month.

Visitors during the week included:- Messrs. John H. Martin, Associate Agronomist in Western wheat investigations; Merritt N. Pope, Associate Agronomist in barley investigations; John H. Parker, of the State Experiment Station; C. O. Johnston, Assistant Pathologist with the State Experiment Station; R. E. Getty, in Charge of Forage Investigations at Hays, Kansas; H. H. Walkden, with the Bureau of Entomology; and Mr. A. L. Hallsted, in Charge of the D. L. A. work at Hays, Kansas.

A small sorghum nursery was planted during the week.

HAYS:

The past week has been another seven days of drought with plenty of south wind and heat, except for one small shower of .22 inch of rain which fell on the 17th, rather during the night. Harvesting of plats proceeded the next morning as if there had been no rain.

Harvesting of all winter wheat on the project was finished on the project Friday morning, except for the continuously stubbled-in plat on which there are some scattering green plants. The wheat was very backward in starting on this plat and likewise the weeds have made a poor growth so the wheat and weeds together have not made sufficient growth to consume all the moisture put in the soil by the April rains.

Corn is making normal growth. Sorghums that succeeded in germinating are making fair growth. However, the stand is not perfect on all the well prepared plats, and on those plats receiving little or no preparation previous to planting time, the stand is poor. While the stand on the well prepared plats is not perfect, as stated above, it is sufficiently thick to make a good stand.

DALHART:

This has been a dry, hot week. Very little wind has blown, which has been a great relief, yet a drawback. The wind has not blown sufficiently to pump water. The station water supply is getting at a low ebb. Water is needed to haul out and put on the young trees that were planted this spring but none is available for that purpose. This is what might be termed a dry country. There have been local showers this week but nothing that will benefit the station. Two showers were recorded which were as follows: .13 inch and .08 inch, falling different days and several days apart. During these showers, some sections were well watered. It is reported that in some places near Dalhart the rain amount to nearly 4 inches.

Much field work was accomplished this week. The June 15 date of planting was made as per schedule. The ground was dry but the planting was made on time. The milo on all rotations and c.c. methods, alternate row milo and cowpeas for alternate cereal and forage block, milo that follows the cowpea varieties, increase milo and sunrise kafir for seed, Sudan grass for seed and the last date of cotton were planted this week.

The milo that was planted on the 15th on the rotations and c.c. methods is coming through at this writing. Soil samples were taken at the time the milo was planted. The alternate general field was plowed, also the late plowed fallows. These were plowed at this time on account of the weed growth and dry weather. It was thought best to plow them before they dried out too much. The cotton is all thinned to stand that is up ready to thin. The varieties on fallow will do to thin the first of the week.

Dalhart, continued;

Poison was put out twice for grasshoppers this week. This work will continue in an effort to prevent serious damage to cotton and other crops. Rabbit poison was also put out this week and a number were killed by shooting.

The crops are growing off well in spite of the dry, hot weather. The first date of planting is nearly knee high at this writing. The first two dates were cultivated this week, as well as the kafir on the rotations and c.c. methods. It is surprising how the seed germinates when planted in the dry soil. Land that has been prepared for planting for some time had dried so that it was a dust for six inches in depth, yet the seed has germinated in pretty good shape. Germination is much more rapid where furrow openers were used. Winter rye will be ready to harvest the first of the week. The rye crop will be short this year on account of the rabbit damage before fencing. In patches where the damage was not so great, the stand is good and the rye well filled.

The grass on the range has turned brown and is about right to burn. Two miles west of the station, the grass is as green as in the spring. It is in spots that way over this whole section of the Panhandle.

TUCUMCARI:

Precipitation of .40 inch on the 17th was of temporary benefit to crops which were up and germinated seeds which had lain in the dry soil since planting. This rain did not in all cases reach to the moist soil below, but it was decided best to plant the variety sorghum, cowpea variety, and broomcorn variety and spacing plats, rather than risk waiting longer for a heavy rain. In addition to planting the above plats, the Sudan grass and cowpeas which alternate with the variety and date-of-planting sorghum plats were planted and some increase land where blowing had occurred to some extent since planting was replanted. Some cultivating, go-deviling of listed crops, and harrowing of all land immediately after planting have been done.

Whether a large amount of replanting on increase land will have to be done will be determined soon, for the rain of the 17th germinated seeds which had been planted in dry soil and somewhat revived those seedlings which had been wind whipped, hail injured, and partially covered with blowing sand during the extremely dry, hot, and windy first half of this month. It is hoped no replanting will be necessary, but high winds of short duration the past week have prevented very rapid recovery of some increase plantings. With a very few exceptions all D. L. A. plats show good stands and are growing normally, although soil moisture samples show that there is not a large amount of available moisture in the soil.

Tucumcari, continued:

This portion of New Mexico is still in need of a general rain; isolatedspots have abundant moisture and crops look well, while in other localities listing or plowing have not been possible. The extreme conditions, therefore, range from very poor to good, with most localities from fair to very poor. Range conditions are serious in most places, with heavy movement of cattle and frequent shortage of water.

The final weights of three lots of yearling steers were made June 13, 14, and 15, and the cattle were shipped to Kansas City this week. When the cattle were put on feed, November 16, the average weight was about 360 pounds, while at the close of the 210-day feeding period the average was over 780 pounds.

Lot No. 1.	Lot No. 2.	Lot No. 3.
Ground milo	Ground milo	Ground milo
Cottonseed meal	Cowpea hay	Cottonseed meal
Cane silage	Cane silage	Cane fodder

Gains per head per day (subject to correction)

2.01 lbs.	1.95 lbs.	2.09 lbs.

Maximum temperature 102, minimum 63; precipitation .40 inch.
Evaporation 2.991 inches. Precipitation, past 8 months, 3.75 inches.
Precipitation, 8 months average, 9.23 inches.

	Mean temp.	Evap.	W.Vel.	Prec.
Average for June	75.	10.333"	6.3	2.18"
First 19 days, June, 1925.	78.5	8.358"	8.6	0.66"

BIG SPRING:

The weather during the past week has been very favorable for plant growth, and as a result all crops have made a good showing.

What little wheat that survived the dry spell last winter is ripening. It will have to be harvested with the mower, as there are very few plants more than tweleve inches high.

The June 15 date of planting was made on time, but very poor stands of cotton have resulted from this date. The sorghums are coming up to a fair stand, but there was not enough moisture in the soil to germinate the cotton seed.

The work this week has consisted mainly of cultivating and thinning. All of the sorghums, corn and broomcorn in the rotations have been thinned, and the cotton is now being worked on.
Maximum temperature 101, minimum 74; precipitation 0.

LAWTON:

Harvest throughout the country is completed and threshing is getting well under way. Premature ripening, due to dry, hot weather brought harvest on about ten days earlier than usual. High winds and short, weak plants made harvest difficult and unsatisfactory.

Threshing was started on the station on the 20th. The yields are light and the grain is shriveled.

All row crops are thinned and well cultivated. Chinch bugs are inflicting extreme injury together with lack of moisture. A few tassels appeared in the corn during the week but do not long survive under the parching temperatures.

Rains have fallen in streaks throughout this county and adjoining counties the past week, but Lawton and vicinity remain dry. Maximum temperatures during the week varied only from 100 to 102.

Ornamental shrubs and trees have never shown the need of water more than at the present time. The last rain of any consequence fell May 16.

Dr. H. V. Harlan, E. F. Chilcott, and J. B. Sieglinger visited the station June 13 and 14.

WOODWARD:

The past week has been hot and dry, though there have been some rains within 25 to 50 miles of the station. Harvest over the country is progressing rapidly and is probably two-thirds finished.

Planting on the D. L. A. project was finished Monday, and practically everything is up to a good stand, except on a few of the late prepared plats. The last date of cotton was planted today, the 20th.

Some planting has been done on the Cereal project and two 3-acre pasture plats of Sudan grass have been planted on the Dairy quarter.

Planting is practically complete with the exception of one small milo field and a small amount on the Cereal project. The third date-of-cotton and second date-of-corn have been thinned.

Several bushels of peaches and a few plums have been picked.
Maximum temperature 103, minimum 68; precipitation 0.
Evaporation 2.780 inches. Average hourly wind velocity 7.2 miles.

ARDMORE:

The week has been unusually hot and dry with no precipitation of any consequence. The moisture supplied by the heavy rains from June 4 to 7, inclusive, has been exhausted in the first foot of the soil, and is being rapidly used up in lower depths.

Small grain has been making a very rapid growth during the past two weeks, but shortly will be in the need of additional moisture. One field of barley, which was seeded on March 21, is ripening very rapidly. The same variety of barley seeded on plats on April 10 is in much better condition.

An eight acre field of alfalfa was clipped just prior to the heavy rains of two weeks ago. The second crop has made a growth of six to eight inches, and now is almost as tall as other alfalfa fields which were not clipped. Fields which were not clipped are now in full bloom, and will have to be cut for hay next week. The yield will not be in excess of one-fourth ton per acre.

Maximum temperature 92, minimum 52; precipitation .26 inch.

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DRY LAND AGRICULTURE INVESTIGATIONS

BUREAU OF PLANT INDUSTRY

U. S. DEPARTMENT OF AGRICULTURE

JUN 27 1925

REPORT FOR WEEK ENDING JUNE 27, 1925.

HAVRE:

Clear and warmer weather has been favorable for corn and the small grains have advanced rapidly. Sixty Day oats and Smyrna barley are beginning to head. Winter wheat plats also headed early in the week.

Plowing for fallow was completed during the week, the soil having been too wet previous to June 20 to attempt the operation. Green manure plats of rye and sweet clover were turned under. All roadways and alleys in the rotation field were cultivated.

First cuttings of irrigated and dry land alfalfa were made and the sweet clover (M. officinalis) in the Forage Crop field was mowed.

Mr. W. P. Baird, of the Northern Great Plains Station, inspected fruit plantings at the station and cooperative farm plantings in this locality on Saturday.

Maximum temperature 90, minimum 51; precipitation 0.

JUDITH BASIN:

Clear warm weather has prevailed throughout the week and all the crops have made a very rapid growth. Oats and winter wheat on the rotations are fully headed and spring wheat and barley are commencing to head.

Field work has been devoted chiefly to harvesting and stacking hay, and cultivating fallow land and row crops.

Maximum temperature 85, minimum 49; precipitation .01 inch.

HUNTLEY:

The continued warm weather has greatly benefited corn, but small grains, especially on the poorer treatments, are beginning to wilt and burn a little. With few exceptions small grains are fully headed and blossoming. Flax is also in bloom.

The very favorable growing conditions of the past two weeks have started a vigorous growth of weeds and volunteer grain which has necessitated an extra amount of cultivation and hoeing. All row crops were cultivated for the second time last week while roads and alleys are again needing attention. Haying operations have been delayed by rains which damaged the crop to some extent.

Maximum temperature 96, minimum 49; precipitation .72 inch.

SHERIDAN:

Quite warm weather has prevailed throughout the week. A light shower on the 22nd delayed haying for a short time, but the weather since has been ideal for getting up the hay crop. All hay plats on the station have been mowed and weighed, but yields have not yet been computed.

All crops have been making rapid growth. Oats in the rotations headed the first of the week. Spring wheat is practically headed now. Weeds have come up very thick in all cultivated crops, and have required more work than usual here to keep them in check. All of the corn has been thinned, hoed and cultivated. Field beans have been hoed and cultivated and a part of the sorgo cultivated.

Maximum temperature 92, minimum 45; precipitation .26 inch.

DICKINSON:

Good growing weather has continued through the week and crops, with plenty of available water in the soil, have developed rapidly.

Early varieties of wheat, oats, and barley are heading over two weeks earlier than in 1924. Winter wheat is fully headed. The April 4 seeding of flax is blooming.

In the green manure rotations the yellow flowered sweet clover had a good stand, nearly two feet high and in full bloom when plowed under June 23.

A field of fallow plowed early was worked with the duck-foot cultivator.

Alfalfa and sweet clover varieties and some small patches of both crops were cut for hay.

Maximum temperature 92, minimum 42; precipitation .13 inch.

Total precipitation to date for June, 4.31 inches.

MANDAN:

Agronomy

Rains the early part of the week delayed all field work. Corn was given the second cultivation during the week, in the rotations varieties and feed fields. Sorghums were cultivated for the first time. Weeding has been in progress around the plats.

Mandan, continued:

Soil samples were taken during the week on corn and wheat. On land that was fallow last year the soil is wet down to the full depth of sampling or six feet. On plats A. and B. in the 'continuous wheat' the soil is wet down to between three and four feet.

The rainfall, so far this month, has been 7.34 inches. This is the third highest amount for June during 51 years. The amount was exceeded in 1890 and 1914. The total amount for the year to date is 10.68 inches, which is over an inch above normal for the first half of the year.

All small grain is in excellent condition. Wheat is fully headed and oats are just starting to head. The chance for a big crop of small grains is very good at the present time. Corn is growing rapidly.

There are reports of rust in some parts of the state, but only a trace of stem rust has been noted on the station to date.
Maximum temperature 89, minimum 45; precipitation 1.59 inches.

Cooperative Grazing Experiment

Grass has improved on all pastures during the week, and the cattle appear to be putting on good gains.

The rainfall at the pasture during the week was 2.29 inches. Practically all of this water went through the spillway of the dam. The low places in all pastures were filled with water.

Visitors of the week included Messrs. E. A. Wilson, Extension Division, North Dakota Agricultural College; C. H. Willson, County Agent, Grant County, and R. C. Newcomer, County Agent, Morton County, with some thirty boys from the Morton and Grant County Boy's Camp; F. E. Cobb, President, Bottineau (North Dakota) Forestry Station; A. C. Dillman, Office of Cereal Investigations.

Horticulture

After the heavy rain on Monday, the fields being to wet for cultivation, some more grading, sodding and general landscaping work was done on the roads and lawns surrounding the seedhouse and greenhouse.

Shrubbery and tree groups on the main campus have been hoed again, and all roads cleaned up and dragged.

Mandan, continued:

Hedges in the testing block were sheared and dead wood removed. Most of the hedges came through the winter in good condition, but the Ninebark, both common and golden, Spirea rosea and Golden elder, had much dead wood on them this spring.

Grapes and raspberry canes were tied up on trellises. Strawberries are beginning to ripen, but there will be a very light crop, owing to poor stands of most varieties.

Twenty-one quarts of green peas were harvested in the acre garden on June 25. All vegetables in this project are doing well. There is a loss of the earliest fruit on tomatoes, peppers and beans, due to the rains and cold weather, but this has been offset by increased vigor of the plants, which will probably result in a better and larger crop on the whole. Some excellent head lettuce is being harvested, variety Salamander being now at its best, with Hanson head lettuce filling up nicely.

Hoeing in the fields has been completed, and second horse cultivation begun.

Arboriculture

Mr. E. J. Georage and Mr. John L. Emerson, started inspecting shelterbelts June 22. Heavy condition of the roads retarded progress to some extent. The following daily reports have been received:

Solen, N. Dak. June 22: - Roads very heavy. Five year old plantings visited today are in excellent condition.

Flasher, N. Dak. June 23: - Eight hours to come 35 miles. Impossible to go on until roads dry up.

Carson, N. Dak. June 24: - Roads better today. Visited 16 shelterbelt cooperators and one fruit planting.

Mott, N. Dak. June 25: - Crops all looking exceptionally well in this territory.

Cultivation of the shelterbelt nursery and experimental blocks was started June 26. Recent heavy rainfall has greatly improved the growth and appearance of all trees.

BELLE FOURCHE:

The week as a whole was cool and moist, though the amount of precipitation was not large. All grain crops have made a splendid growth. In fact the condition of all grain crops is as good as it has ever been at this time of the year. Corn is well advanced for this time of the year praticularly the plats on fall plowing.

Bellefourche, continued:

The amount of moisture in reserve in the grain plats cropped last year is not large. In spite of the cool weather a few plats commenced to show drought injury toward the end of the week. Only two plats of grain show any material amount of injury. These are the two plats of wheat following sweet clover plowed under for green manure. Both of these plats show a considerable number of blasted heads. A number of plats of both wheat and oats show some burning of the basal leaves, but the injury is not enough to be noticeable should rain come soon. A few days of hot, dry weather would undoubtedly cause firing to start on a large number of plats.

The hay crops were cut during the week. The two alfalfa plats produced an average yield of 850 lbs. per acre and the two plats of brome grass produced at the rate of 1250 lbs. per acre. The sweet clover was not dry enough to weigh, but the yield will surely be at least double that of the other hay crops.

Maximum temperature 93, minimum 49; precipitation .36 inch.
The rainfall for June to date is 3.00 inches. This is one-half inch above the average for the month.

ARCHER:

During the past two weeks the weather has been warm and dry. Local showers have frequently occurred but only the outer edges have reached the station. On June 21 and 26 the station received .04 and .05 inch of precipitation, respectively.

Crops to the north and northeast are reported to be very good, equal to those of 1918. While not equal to this, the crops to the south and southeast are good. Observations made during the trip to Fort Collins and Akron indicate that a considerable number of the irrigation ditches and canals have had but very little or no water in them this season. In these sections there is a large acreage of beans.

The crops at the station have done very well considering the dry weather. Some of the spring seeded small cereals are burning but most of them are in good shape. The lack of moisture is holding back the growth of peas. The corn which was not reseeded is looking well and that which was reseeded is beginning to make a favorable showing. The same condition holds true with regards to the sunflower crop. As yet the winter wheat is holding its own with some firing. The worst condition is on Plat A, Rotation 115, where rye was plowed under for green manure. The 17-acre field of winter wheat in the general field is being harvested for hay. Indications are that it will produce between 2000 and 2500 pounds of hay per acre of good quality. This was seeded on duck-footed corn ground.

Archer, continued:

For the past two weeks most of the work at the station has consisted of cultivating the row crops. Today the spraying of potatoes for the Colorado potato beetle is in progress. This beetle has appeared in great numbers and are laying an abundance of eggs.

Maximum temperature 88, minimum 45; precipitation .09 inch.

AKRON:

Weeds have made their appearance in goodly numbers, and they have made phenomenally rapid growth since the rains of the past two weeks. The listed corn was gone over for the second time early in the week, and the surface planted corn cultivated for the second time the latter part of the week. The Forage Sorghum and Sorgo variety experiment was cultivated about the middle of the week. The bean and soy bean variety experiment also was cultivated as well as various isolated increase plats of corn and forage crops. Alleys were cultivated and hoed. Fallow land for next year's forage variety experiment was cultivated. All fallow strips, or series, were gone over with hoes to remove stray surviving weeds. The rate and spacing corn and the rotation and sheep rotation corn was thinned to uniform stands. The orchards were cultivated and partly hoed and some time was spent Saturday in the forestry experiment.

Mr. L. Johnson, of the Botany Department of the State Agricultural College, spent two days here the past week and aid was furnished him in getting the quadrats in the native sod sheep pasture clipped.

The station enjoyed many visitors returning from the Agronomy Conference held at Fort Collins. These were Mr. A. L. Nelson, of the Archer Station; Messrs. Zook, Weakley and Craig, of the North Platte Station; Mr. and Mrs. Clyde McKee and family, the head of the Agronomy Department of the Montana State College; Mr. John Martin, of the U. S. Department; Mr. D. W. Robertson, of the Agronomy Department of the Colorado State College; Mr. L. Johnson, of the Botany Department of the State Agricultural College; and Mr. F. A. Coffman, of the U. S. Department of Agriculture.

The early frost caused complete damage to the fruit crop, there appearing no set in the orchard, not even on the currants and gooseberries.

Maximum temperature 92, minimum 51; precipitation .77 inch.

NORTH PLATTE:

An improvement in moisture conditions during the past two weeks has been of much benefit to the late varieties and seedings of grain. Earlier grain has also filled better but was too far advanced to respond in straw growth and is very short. Much of it is very difficult to cut with a binder.

North Platte, continued:

Winter wheat harvest was begun June 24. All plats are now in the shock except those on fallow and green manure. A few early varieties of oats have also been cut. Harvest is about 10 days earlier than the average date.

Corn continues to make a rapid growth and is about 12 inches higher than is normal for the season.

Three representatives from this station attended the meeting of Western Agronomists at Fort Collins, June 18-20, making the trip by auto, stopping at the Archer Station on the way out and at the Akron Station returning. There were about 70 in attendance at the meeting. Of these about 25 were from the Colorado College and station. Other states were represented as follows: Nebraska 9; Kansas 5; Wyoming 5; Montana 2; Utah 1; Idaho 1; Washington 1; Texas 1. The U. S. Department was represented by 5 men from Cereal Investigations, 5 from Dry Land Agriculture and 1 from Sugar Beet Investigations. Morning, afternoon and evening sessions were held each day. Twenty-five papers were presented. The 1926 meeting will be held at Logan, Utah.

COLBY:

The past week has been an excellent one for harvesting. The binder has been kept busy every day of the week and most of the grain that is ready to cut has been cut. Grain cut during the week consisted of all winter wheat plats, including varieties, rotations, method of seeding, and date of seeding; all of the barley, including varieties, rotations, commercial fields, and nursery material; the increase field of spring wheat, and a few of the spring wheat varieties; all of the oats varieties and a few of the oat rotations. There remains to be cut a few oat plats and the spring wheat plats on the D. L. A. rotation, the spring wheat varieties and the field of commercial Kanred. In this connection, all of our Kanred wheat has been spoken for for seed this year. It should take less than two days to finish cutting everything that remains to be cut on the station. We should be through harvesting with everything that is ready to cut before the first of July. This is earlier than we usually begin, as harvest usually starts on the station not earlier than the first of July.

Winter wheat on the D. L. A. rotations, in general, shows up very plainly this year either the cultural treatment or the previous crop or both. In general, where a good crop was produced the year previous the winter wheat on that ground is very poor regardless of the cultural treatment.

Colby, continued:

The wheat that is out of line with commercial fields in the county on the D. L. A. project this year is that which has been produced on ground that was in corn the year previous. This is due, primarily, to two reasons: one, that the stands of corn and the crop produced on the project were very much better last year than that produced on the farms in the county and the other is that many stalk fields were filled with snow during the winter. The explanation of these two given reasons is that the commercial fields were very much like a summer fallow during the previous season with the thin stands of corn and the excess snow during the winter kept the stand of wheat from being thinned out (as was true of the winter wheat growing on corn stubble on the D. L. A. project) and this snow also gave an excess of moisture that the bare plats did not have.

Barley, in general, behaved very similar to winter wheat. The barley varieties will average better than last year; and the same differences prevail between varieties as prevailed last year. Winter wheat yields on the station will not average as good as those of last year; judging solely from appearances at cutting time. Some of the wheat is going to be badly shrivelled, some will have small kernels, while some fields will be of good quality. The uneveness of the quality of the wheat accounts for the lower yields than had been expected by farmers.

Corn continues to have a good color and to grow nicely. Sorghums are growing slowly at this time. This is customary for this time of the year. Harvest will be in full swing on practically every farm by the first of the week. We should be through harvesting on the station with everything that is ready before the first of July. Thus, we will be through harvesting on the station before our normal date for starting to harvest.

Visitors during the week included Dr. C. O. Levine, of the University of Minnesota, Dr. M. C. Sewall, of the Kansas Station, Prof. H. H. Laude of the Kansas Station, and Prof. Clyde McKee, of the Montana Experiment Station.

The weather continues dry and warm. The redeeming feature of the weather has been the absence of high winds. Evaporation is relatively high and the ground is hot. Pastures are brown and the reserve of soil moisture on continuous cropped ground is exhausted, except in a few favored localities. Getting a feed crop is the chief worry now.

HAYS:

Two good rains occurred during the week, one on the 22nd, and the other on the following day with a total of 3.03 inches. This is really the first good rain in a long time. The temperature ranged from 55 to 102.

Hays, continued:

Since the rain all feed crops where a stand was secured are looking fine. Spring wheat on the project was harvested Thursday.

Threshing of small grains was commenced this morning. Saturday, June 27. All of the oats and barley plats have been threshed and a few plats of winter wheat. Yields generally are very low, oats running from nothing to 26 bushels per acre, barley nothing to about 20 bushels, and, thus far, winter wheat from nothing to 23 bushels per acre. It is possible there are a few plats of winter wheat on the project that will thresh out better yields than those already threshed.

GARDEN CITY:

Dry weather continues throughout this part of the Great Plains. 7.01 inches of moisture have been received since January 1. This amount is 1.88 inches below the normal for that period. Most of the moisture received this year has fallen in the form of light showers and a great deal of it has been lost through evaporation.

Wheat harvest will soon be completed in this section of the state. Most of the wheat is running fairly high in protein, but has a rather low test weight. All winter wheat on the dry land project was harvested some time ago.

Sorghums are making a satisfactory growth on all plats where the seed bed was free from weeds at planting. Poor stands were secured on practically all milo plats, due perhaps to the dry condition of the soil, and to seed that was rather low in germination. Farmers are reporting poor stands of sorghum on most all fields.

Field work this week has consisted of thinning all sorghum plats to a uniform stand, replanting skips in the milo plats, trimming roadways, and cultivating the listed fallows.

Maximum temperature 102, minimum 53; precipitation .13 inch.

DALHART:

The weather continues dry and hot. No precipitation has been recorded except for a small shower Saturday morning, which settled the dust. Indications at present are fair for rain but may prove to be like other times when conditions looked so favorable. There has been a total precipitation to date this year of 5.93 inches. The average for the first six months is 9.79 inches which makes a shortage of 3.86 inches. There has been just enough wind to cause the mill to pump enough water this week for necessities. No water is available for watering the trees that were set out this spring. These trees are very much in need of water and will be taken care of as soon as possible.

Dalhart, continued:

It is now just 20 minutes of 5:00 p.m., June 27. About 4:00 p.m. the clouds gathered and fortunately it began to rain soon after. It has been raining now almost an hour during which time it has certainly been pouring it on. Some hail fell with the heaviest part of the rain but it was small and did not damage. I shall try and keep up with this rain and advise accordingly as it progresses. It ceased raining about 5:10 p.m. but continued to rain pretty hard up to the time it stopped. The measurement totaled 1.18 inch. There was considerable runoff but the fields retained most of the water. The runoff occurred on unplowed areas. There is still a prospect for more rain; however, this may not visit us. The rain did not extend very far east but seems to have extended a good way south and west.

The crops are making wonderful progress in spite of conditions. The varieties and last date as well as the June 1 date are ragged in stand. The seed is lying in dry dirt waiting for enough water to germinate it. The plantings on rotations, which were made around June 15 and planted with furrow openers, have emerged to a good stand in most cases and are now ready to thin. The milo that was planted in the increase field only a few days ago has emerged. This was also planted with furrow openers. All the varieties, rates and dates were planted flat. This was done in order to have them as nearly comparable as possible since the first date plantings were made without furrow openers when conditions were more favorable.

Work for the week consisted of cultivating, thinning, hoeing, taking of soil samples, harvesting rye, mowing and other odd jobs. A fence was built around the variety peanut planting to protect it from the ravages of jack rabbits. The peanuts have not all germinated as yet and the stand is quite ragged.

The cotton planted on May 10 and 20 have perfect stands. The dates planted June 1, 10 and 20 are not up to stand. The June 1 planting is nearly all up but the stand is not as good as in the earlier dates. The June 10 planting is very ragged but there is sufficient seed on the ground to insure a good stand as soon as sufficient moisture is available. The June 20 date is just beginning to emerge in places. The cotton was all planted with the use of furrow openers.

The crops planted on the new rotations and listing methods, which were put in this year, are up to a pretty good stand. Grasshopper poison was put out again this week. Several rabbits were killed by poison.

TUCUMCARI:

Precipitation of 0.67 inch the past week brought the total for the month of June to 1.33 inches and for the year to date to 3.91 inches, compared with an average of 7.71 inches for the first six months of the year. Crops not injured by the winds and sand of early June are making excellent growth, while recently planted crops are emerging to good stands. Injured crops have in some cases recovered, while replanting has been necessary in a few instances. Conditions in this locality are still variable, some farmers having excellent crop prospects, while nearby farms are too dry to permit of listing for crops.

Increase planting was completed this week, while thinning and cultivating have progressed satisfactorily. The variety grain sorghum plats which were planted June 19 had in all cases emerged to good stands the 25th or 26th. Cowpeas and Sudan grass plats alternating with the above plats emerged to good stands five days after planting.

The unusually windy weather of early June was followed by a period of unusual calm, the velocity the past week averaging only 4.9 miles per hour.

Maximum temperature 100, minimum 61; precipitation .67 inch.
Evaporation 2.270 inches.

BIG SPRING:

A rain of .58 inch fell on the night of June 24; this fell in such a manner that no runoff occurred, with the result that the crops will receive the maximum benefit from it. This rain was badly needed in this section for the sorghums had started to roll.

A few plats of winter wheat which did not winter kill were cut with the mowing machine this week; there will hardly be enough to thresh as the crop was very light.

The May 1 date of seeding of feterita is in full head, while the same date of milo is just starting.

The work this week has consisted mainly of cultivating and thinning. With the exception of the rate of seeding of cotton and the late dates of sorghums, the season's thinning has been completed.

Mr. Dangerfield, of the Weather Bureau, was a station visitor on June 24.

Maximum temperature 97, minimum 68; precipitation .58 inch.

LAWTON:

High temperatures, hot winds, and chinch bugs have entirely eliminated the corn crop in this part of the country. Chinch bugs are a heavy menace to the feed crops throughout the county. In the first place the acreage planted to such crops was small and present conditions indicate a critical shortage this fall.

Threshing of small grain is in full force throughout the county. Yields of oats are probably a little better than was anticipated but wheat averages from 3 to 10 bushels per acre. The probable average will be 4 to 5 bushels. Threshing on the station was completed during the week and poor results obtained.

Many of the sorghums both grain and forage are entirely killed and the prospects for the remainder that live are meagre. Cotton has suffered somewhat from rabbits and plant lice but is not yet sufficiently advanced to be damaged by drought. The grasshopper situation seems to be pretty well under control. So far, about 19000 lbs. of arsenic have been used in the county. Native vegetation is very dry and the situation requires careful watching for the "hoppers" are hunting for green food.

Maximum temperature 102.

WOODWARD:

Most of the week has been rather hot, without much wind. We have received two showers, one of them .63 inch did considerable good.

Harvesting is about completed in this vicinity, and threshing has commenced. No reports of yields have been received.

Most of the field work during the week has consisted of cultivating nearly all of the fields and experimental plats. One day was spent on road work when it was too wet for field work. The wheat and rye plats in the rotations have been plowed.

A good stand was obtained on most of the plats, and thinning will probably be started the first of the week. A field of milo was planted the first of the week, and one of feterita planted Friday.

Maximum temperature 104, minimum 60; precipitation .80 inch.

Evaporation 2.660 inches. Average hourly wind velocity 5.2 miles.